REMARKS

This amendments made herein serve only to correct inadvertant errors in the specification and claims. No new matter has been added.

It is believed that no fees are necessitated by entry of this paper, however the Commissioner is authorized to charge any additional fees, or credit any overpayment in fees, to Deposit Account No. 50-0320.

An early examination on the merits is requested.

Attached hereto is a marked-up version of the changes made by the current Preliminary Amendment. The attached pages are captioned "Version with markings to show changes made".

Respectfully submitted,
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Enc. - Version with markings to show changes made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Page 12, paragraph 2, please amend to read as follows:

Figure 7 illustrates an X-ray diffraction pattern of a $BaZrO_3$[;] film as fabricated by Example 1;

Page 22 to 23, last paragraph, please amend to read as follows:

A non-aqueous precursor solution for the deposition of a $BaZrO_3$ film was first prepared as follows. Barium metal (as supplied by Aldrich) was completely dissolved in a volume of 2-methoxyethanol (as supplied by Aldrich) by stirring at room temperature to form a barium alkoxide solution. A stoichiometric amount of zirconium n-propoxide, a 70 wt% solution in n-propanol (as supplied by Aldrich), was then added to the barium methoxyoxide solution and refluxed at 124 °C, the boiling point of 2-methoxyethanol, for five hours. Then, a volume of 2-methoxyethanol was added to the refluxed solution to provide a 0.05 M precursor solution. Using the apparatus of the first-described embodiment and the so-prepared solution, a $BaZrO_3$ film was deposited on a silver substrate 5, with a substrate temperature of 600 °C, a substrate 5 to nozzle unit 11 distance of 30 mm, an electric field voltage of 10 kV, the piezoelectric transducer 43 of the aerosol generator 25 being operated at a frequency of 1.7 MHz and power of 50 W, and nitrogen being supplied at 30 ml per minute as the carrier gas. Nitrogen was used as the carrier gas to minimise the reaction between the barium and carbon dioxide in the air. The resulting film[.], formed in a single run without the need for any post-deposition heat treatment, was a crystalline $BaZrO_3$ film as characterized by the X-ray diffraction pattern illustrated in Figure 7.

Page 23, the first full paragraph, please amend to read as follows:

A 0.01 M aqueous precursor solution for the deposition of a CdS film was first prepared using cadmium chloride and thiourea. Using the apparatus of the second-described embodiment and the so-prepared solution, a CdS film was deposited on a glass substrate 105, with a substrate temperature of 450 °C, a substrate 105 to nozzle unit 111 distance of 20 mm, an electric field voltage of 10 kV, the piezoelectric transducer 143 of the aerosol generator 125 being operated at a frequency of 1.7 MHz and power of 50 W, a deposition time of five minutes, and air being supplied at 50 ml per minute as the carrier gas. The resulting film, formed in a single run without the need for any post-deposition heat treatment, was a dense, crystalline CdS film having a thickness of about 1 [u]μm, with a columnar structure and a smooth and uniform surface. SEM micrographs of the resulting film are illustrated in Figures 8(a) and (b).

Page 23, the second full paragraph, please amend to read as follows:

A colloidal silica solution (Ludox™, as supplied by DuPont) was diluted with distilled water to prepare an aqueous precursor solution having a concentration of 0.1 g/ml for the deposition of a SiO_2 film. Using the apparatus of the second-described embodiment and the so-prepared solution, a SiO_2 film was deposited on a glass substrate 105, with a substrate temperature of 200 °C, a substrate 105 to nozzle unit 111 distance of 20 mm, an electric field voltage of 10 kV, the piezoelectric transducer 143 of the aerosol generator 125 being operated at a frequency of 1.7 MHz and power of 20 W, a deposition time of one minute, and air being supplied at 50 ml per minute as the carrier gas. The resulting film, formed in a single run without the need for any post-deposition heat treatment, was a porous SiO_2 film with a reticular structure. SEM micrographs of the resulting film are illustrated in Figures [11]9(a) and (b).

Page 24, numbered paragraph 17 as added by preliminary amendment of July 13, 2001, please amend to read as follows:

17. The method of any of paragraphs 1 to 16[.], wherein the nozzle unit includes a tubular section upstream of each outlet.

Page 24, numbered paragraph 18 as added by preliminary amendment of July 13, 2001, please amend to read as follows:

18. The method of paragraph 17[.], wherein the tubular section is an elongate section. tubular section is composed of an insulating material.

Page 24, numbered paragraph 29 as added by preliminary amendment of July 13, 2001, please amend to read as follows:

29. The method of any of paragraphs 1 to 28, wherein the aerosol is delivered to the substrate such as to achieve a film growth rate of at least 0.2 [u]μm per minute, preferably at least 1 [u]μm per minute, more preferably at least 2 [u]μm per minute.

IN THE CLAIMS:

Please amend the claims without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows:

3. (Amended) The method of claim 1, wherein the substrate is heated during deposition[,].

28. (Amended) The method of claim 24 when appendant upon claim 4, wherein the flow of the carrier gas is provided such as to maintain the decreasing[,] temperature gradient.

29. (Amended) The method of claim 1, wherein the aerosol is delivered to the substrate such as to achieve a film growth rate of at least 0.2 [u]μm per minute, preferably at least 1 [u]μm per minute, more preferably at least 2 [u]μm per minute.

64. A method of fabricating a powder, preferably an ultrafine powder, comprising the steps of:

providing a heated zone:

generating an aerosol comprising droplets of a material solution;

providing a nozzle unit for delivering the aerosol to the heated zone, the nozzle unit including at least one outlet through which a directed flow of the aerosol is delivered and at least one electrode;

charging the aerosol droplets with a positive or negative charge;

providing a flow of the aerosol through the nozzle unit so as to deliver a directed flow of the aerosol from the at least one outlet; and

generating an electric field between the heated zone and the at least one electrode such that the directed aerosol flow is attracted towards the heated zone where the aerosol droplets react homogeneously in the gas phase to[-] form a powder.